

REMARKS

Claims 7, 9, 11, and 13-14 are pending in this application. Claims 1-6, 8, 10, and 12 have been canceled by prior amendment. No new matter is added.

Preliminary Remarks

Applicants first point out that the Office Action's rejections are based on Shibata et al., a Japanese application publication with an English language abstract, Nishiwaki et al., a Japanese application publication with an English language abstract, and JP (4-116162), an unexamined Japanese utility application with no English language abstract.

According to M.P.E.P. § 706.02 II, "Citation of and reliance upon an abstract without citation of and reliance upon the underlying scientific document is generally inappropriate where both the abstract and the underlying document are prior art." Further, the M.P.E.P. requires that, "If the document is in a language other than English and the examiner seeks to rely on that document, a translation must be obtained so that the record is clear as to the precise facts the examiner is relying upon in support of the rejection." M.P.E.P. § 706.02 II.

The only qualification the M.P.E.P. provides is that, "In limited circumstances, it may be appropriate for the examiner to make a rejection in a **non-final** Office action based in whole or in part on the abstract only without relying on the full-text document. In such circumstances, the full text document and a translation (if not in English) may be supplied in the next Office action." M.P.E.P. § 706.02 II (emphasis added).

Thus, Applicants respectfully request that the Examiner provide Applicants with translations of the non-English documents Shibata et al. (JP 04-042582), JP (4-116162), and Nishiwaki et al. (JP 59085858 A), or withdraw the finality of this Office Action.

Section 103(a) Rejections

The Office Action rejects claims 7 and 9 under 35 U.S.C. § 103(a) as being unpatentable over Shibata et al. (JP 04-042582, hereinafter "Shibata") in view of JP (4-116162). Applicants respectfully traverse the rejection.

As a preliminary matter, Applicants note that the Office Action asserts that the term "major" is a relative term. Applicants respectfully submit that the term "major" is used here in order to distinguish the front surface, which is the main surface, from a side surface. The term "major" always appears in the context of a "major front surface." See Specification, page 3, lines 11-12; page 4 lines 3-5; and others. Applicants assert that in the present invention, the term "major front surface," means "a major surface" or "a main surface."

To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. M.P.E.P. § 2143.03. The invention of claim 7 discloses at least the feature of a pellet characterized in that the major front surface and the side surfaces of the pellet are rough surfaces. The Office Action takes the position that Shibata discloses "a light emitting diode comprising a **pellet**." (emphasis added) (See Office Action, page 2, paragraph 3). Applicants respectfully submit that Shibata discloses a light emitting diode array, not a pellet (see Shibata, col. 2, lines 54-56). On a light emitting diode array, each light emitting diode does not have a side surface, as indicated in Fig. 1 of Shibata, where the GaAsP layer 52 and the SiN_x film 54 surround the side surfaces and part of the front surface of the light emitting surface 58. (see Shibata, Abstract; see also Shibata et al., U.S. Patent No. 5,132,751, Fig. 1).

The Office Action admits that Shibata fails to teach the side surfaces of the pellet are roughened on the sides. Claim 7 recites at least the feature of "side surfaces of the pellet are rough surfaces." The Office Action asserts that JP (4-116162) teaches the feature of an LED having a rough side surface. However, JP (4-116162) does not teach or suggest such a feature. JP (4-116162) merely labels the portion 7 of the pellet as a "side" without teaching or disclosing side surfaces of the pellet being intentionally roughened (see JP (4-116162)).

For the above reasons, Applicants submit that neither Shibata nor JP (4-116162), alone or in combination, teach or disclose all the elements of claim 7.

Establishment of a *prima facie* case of obviousness also requires that the Office Action show some suggestion or motivation to combine the reference teachings. M.P.E.P. § 2143. The Federal Circuit has produced a number of decisions overturning obviousness rejections due to a lack of suggestion in the prior art of the desirability of combining references. M.P.E.P. § 2145 X. The Office Action asserts that "it would have been obvious to one skilled in the art at the time the invention was made to modify the invention of Shibata to include the side surfaces, as taught by JP (4-116162), so as to increase the light emitting surfaces." However, JP (4-116162) does not teach or suggest that a pellet having side surfaces necessarily increases light emitting surfaces. Additionally, neither Shibata nor JP (4-116162) teaches or suggests the inclusion of light emitting surfaces on side surfaces of a pellet. Thus, modifying Shibata to include such side surfaces, if possible, would not necessarily have resulted in an increase in light emitting surfaces.

Additionally, the Federal Circuit has held that it is improper to combine references where the references teach away from their combination. M.P.E.P. § 2145 (X)(D)(2).

When considering a prior art reference, that reference must be considered in its entirety, including portions that would lead away from the claimed invention. M.P.E.P. § 2141 VI. As discussed above, Shibata discloses a light emitting array, not a light emitting pellet. An essential feature of a light emitting diode array structure is that the neighboring light emitting diodes contained within the array do not interfere with each other. Therefore, it is necessary to prevent the leakage of light from the light emitting diodes that comprise the array structure in the horizontal direction. Thus, not only is it not obvious to combine the teachings of Shibata and JP (4-116162), Shibata teaches away from any feature that would "increase the light emitting surfaces" as the Office Action suggests (see Office Action, page 3, line 4).

Therefore, there is no basis for the combination of Shibata and JP (4-116162) since it would not necessarily result in an increase in the light emitting surfaces, as asserted by the Office Action, and because the references teach away from such a combination. Thus, Applicants respectfully submit that no teaching, suggestion or proper motivation has been shown to combine the teachings of Shibata and JP (4-116162).

Thus, for at least the above reasons, reconsideration and withdrawal of the rejection of claim 7 under 35 U.S.C. § 103(a) is respectfully requested.

Claim 9 depends from independent claim 7. Therefore, as claim 7 is allowable over the cited prior art, Applicants submit that claim 9, which depends from allowable claim 7, is likewise allowable over the cited prior art.

The Office Action also rejects claims 11, 13, and 14 under 35 U.S.C. § 103(a) as being unpatentable over Shibata in view of Nishiwaki et al. (JP 59085858 A, hereinafter "Nishiwaki"). Applicants respectfully traverse this rejection.

Claim 11 recites at least the feature of “the pellet is treated with an etching solution of an aqueous solution containing Br₂, nitric acid, hydrofluoric acid, and acetic acid, or I₂, nitric acid, hydrofluoric acid, and acetic acid to form fine projections on at least the major front surface of the pellet.” Neither Shibata nor Nishiwaki teach or suggest such a feature. Specifically, Nishiwaki teaches only a solution consisting of saturated bromine water, water, and nitric acid (see Nishiwaki, abstract). Shibata does not mention an aqueous solution of any kind.

Additionally, the claimed invention teaches that the major front surface of the pellet is made of a GaAsP mixed crystal. The etching agent disclosed in Nishiwaki is intended for etching InP semiconductor material (see Abstract). Nowhere does Nishiwaki teach or disclose any possibilities of etching GaAsP. Further, the claimed invention sets forth the limitation of treating the pellet to form “fine projections on at least the major front surface of the pellet.” Nowhere does the combination of Nishiwaki and Shibata teach or disclose such a feature.

To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. M.P.E.P. § 2143.03. Since neither Shibata nor Nishiwaki, alone or in combination, teach or suggest all the features of the invention of claim 11, Applicants respectfully request that the rejection of the claims under 35 U.S.C. § 103(a) be withdrawn.

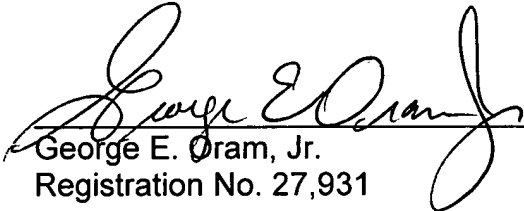
Claims 13 and 14 depend from independent claim 11. Therefore, as claim 11 is allowable over the cited prior art, Applicants submit that claims 13 and 14, which depend from allowable claim 11, are likewise allowable over the cited prior art.

Conclusion

Applicants respectfully submit that this application is in condition for allowance and such action is earnestly solicited. If the Examiner believes that anything further is desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below to schedule a personal or telephone interview to discuss any remaining issues.

In the event this paper is not considered to be timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fee deficiency or credit any overpayment to Deposit Account No. 01-2300 referencing Attorney Docket No. 107242-00005.

Respectfully submitted,


George E. Oram, Jr.
Registration No. 27,931

Customer No. 004372
ARENT FOX PLLC
1050 Connecticut Avenue, NW
Suite 400
Washington, DC 20036-5339
Tel: (202) 857-6000
Fax: (202) 857-6395

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